

ABSTRACT OF THE DISCLOSURE

A solid oxide fuel cell stack generates power by an electrochemical reaction of oxygen with hydrogen or
5 hydrogen and carbon monoxide in a reformed gas which is produced from a natural gas by a reformer, and supplies waste heat and an anode exhaust gas containing steam to the reformer. The reformed gas produced by the reformer is reduced its CO concentration through a CO shift converter
10 and a CO selective oxidizer. A polymer electrolyte fuel cell stack generates power by an electrochemical reaction of oxygen with hydrogen contained in a reformed gas which is emitted through the CO selective oxidizer with reduced CO concentration and with condensed moisture by a condenser.